

FORM PTO-1390 (REV 12-29-99)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER 31068-2
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>09/581040</b>
INTERNATIONAL APPLICATION NO. PCT/EP98/07957	INTERNATIONAL FILING DATE December 8, 1998	PRIORITY DATE CLAIMED December 8, 1997	
TITLE OF INVENTION TEXTILE REINFORCING LAYER FOR FLEXIBLE HOSES, TUBES AND SIMILAR EXTENDED OBJECTS			
APPLICANT(S) FOR DO/EO/US DE MEYER, Willy and FAKET, Mark			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
<ol style="list-style-type: none"> <li><input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li><input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li><input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).</li> <li><input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.</li> <li><input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> <li><input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).</li> <li><input checked="" type="checkbox"/> has been transmitted by the International Bureau.</li> <li><input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li><input type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(3)).</li> <li><input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19(35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> <li><input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).</li> <li><input type="checkbox"/> have been transmitted by the International Bureau.</li> <li><input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li><input checked="" type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li><input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li><input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). unsigned</li> <li><input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol>			
Items 11. to 16. below concern document(s) or information included:			
<ol style="list-style-type: none"> <li><input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li><input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li><input checked="" type="checkbox"/> A FIRST preliminary amendment.</li> <li><input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.</li> <li><input type="checkbox"/> A substitute specification.</li> <li><input type="checkbox"/> A change of power of attorney and/or address letter.</li> <li><input checked="" type="checkbox"/> Other items or information: <ol style="list-style-type: none"> <li>PCT Request</li> <li>International Preliminary Exam. Report together with the annex containing amended claims 1-14</li> <li>German specification</li> <li>Publication (international)</li> <li>PCT Demand</li> <li>PCT/IB/301, 304, 308, &amp; 332</li> </ol> </li> </ol>			
		Express Mail Label No.: EL635862696US Date of Deposit: <u>June 8, 2000</u> I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20237 <u>Willy Meyer</u> Signature of person mailing paper or fee	

U.S. APPLICATION NO. <b>09/581040</b>		INTERNATIONAL APPLICATION NO. PCT/EP98/07957		ATTORNEY'S DOCKET NUMBER 31068-2	
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17. ☒ The following fees are submitted:

**BASIC NATIONAL FEE** ( 37 CFR 1.492 (a) (1) - (5) ) :

Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO ..... **\$970.00**

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO ..... **\$840.00**

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... **\$690.00**

International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... **\$670.00**

International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) ..... **\$96.00**

**ENTER APPROPRIATE BASIC FEE AMOUNT =**

Surcharge of **\$130.00** for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(e)).

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	16 - 20 =	0	X \$18.00	\$ 0
Independent claims	2 - 3 =	0	X \$78.00	\$ 0
MULTIPLE DEPENDENT CLAIM(S) (if applicable) 1				+ \$260.00
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$ 1,100.00

Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statment must also be filed (Note 37 CFR 1.9, 1.27, 1.28).

**SUBTOTAL =**

Processing fee of **\$130.00** for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f)).

**TOTAL NATIONAL FEE =**

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **\$40.00** per property +

**TOTAL FEES ENCLOSED =**

	Amount to be refunded:	\$
	charged:	\$

**CALCULATIONS PTO USE ONLY**

a. ☒ A check in the amount of \$ 1,100.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 23-3030. A duplicate copy of this sheet is enclosed, but not to include payment of issue fees.

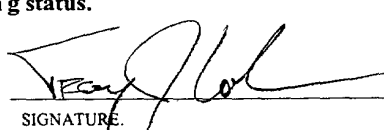
  

**NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending g status.**

SEND ALL CORRESPONDENCE TO

Troy J. Cole  
WOODARD, EMHARDT, NAUGHTON, MORIARTY & MCNETT  
Bank One Center/Tower, Suite 3700  
111 Monument Circle  
Indianapolis, Indiana 46204 US

  
 SIGNATURE  
Troy J. Cole  
 NAME  
35,102  
 REGISTRATION NUMBER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:	)	
Willy De Meyer et al.	)	Before the Examiner
Serial No. Not Yet Assigned	)	Not Yet Assigned
Filed herewith	)	
TEXTILE REINFORCING LAYER FOR	)	
FLEXIBLE HOSES, TUBES AND	)	
SIMILAR EXTENDED OBJECTS	)	June 8, 2000

09/381740

PRELIMINARY AMENDMENT

BOX PCT  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Please enter the following amendments prior to examination of the present application.

IN THE CLAIMS:

Please delete previously submitted claims 1-14, and add the following new claims 15-30.

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Date of Deposit June 8, 2000

I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to the Assistant Commissioner for Trademarks, 2900 Crystal Drive, Arlington, Virginia 22202-3513.

*Erica L. Taylor*

Erica L. Taylor

09/381740

[illegible]

By:

Troy J. Cole  
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## Patent claims

15. Extended textile reinforcement layer for hoses, tubes and similar extended objects, that comprise at least one inner layer, the textile reinforcement layer and one outer layer, that is bonded to the textile reinforcement layer and the inner layer, characterized by the fact that the textile layer consists of a stiffening material, that at normal ambient temperature will act as a stiffener in a direction different from the longitudinal axis of the body to be stiffened, particularly in a substantially perpendicular direction to the longitudinal axis of the body to be stiffened.
16. Reinforcement layer in accordance with claim 15, characterized by the fact that the stiffening material loses its stiffness at a higher temperature which is harmless for the reinforcement layer.
17. Reinforcement layer in accordance with claim 15, characterized by the fact that the stiffening consists of individual threads or yarns.
18. Reinforcement layer in accordance with claim 15, characterized by the fact that the stiffening itself is a textile product, for example a fabric, knitted fabric, knit, double knit or a fleece.
19. Reinforcement layer in accordance with claim 15, characterized by the fact that the stiffening comprises at least one foil.
20. Reinforcement layer in accordance with claim 19, characterized by the fact that the foil consists of thermo-plastic material, heat-hardened synthetic material or metal.

21. Reinforcement layer in accordance with claim 19,  
characterized by the fact that the foil is extruded together with the textile  
reinforcement layer.
22. Reinforcement layer in accordance with claim 17,  
characterized by the fact that the stiffening forms a textile bond with the  
reinforcement layer.
23. Reinforcement layer in accordance with claim 18  
characterized by the fact that the stiffening forms a textile bond with the  
reinforcement layer.
24. Reinforcement layer in accordance with claim 19  
characterized by the fact that the stiffening forms a textile bond with the  
reinforcement layer.
25. Reinforcement layer in accordance with claim 15  
characterized by the fact that the stiffening is a chemical material, which is  
absorbed by the reinforcement layer.
26. Reinforcement layer in accordance with claim 15  
characterized by the fact that the stiffening material is a polymer or copolymer.
27. Reinforcement layer in accordance with claim 15,  
characterized by the fact that the material of the stiffener is the matrix material or  
a related material of the object to be reinforced.

28. Reinforcement layer in accordance with claim 15  
characterized by the fact that the melting point of the stiffening material is lower  
than the melting point of the reinforcement layer material.
29. Reinforcement layer in accordance with claim 15  
characterized by the fact that the reinforcement layer is a fabric, knitted fabric,  
knit, double knit or a fleece.
30. Hose, tube or similar extended objects, characterized by the presence of one or  
more reinforcement layers according to the aforementioned claims, in which the  
stiffening of the reinforcement layer(s) has a stiffening effect at normal ambient  
temperature in a direction that deviates from the longitudinal axis of the object to  
be reinforced, especially in a substantially perpendicular direction to the  
longitudinal axis of the object to be reinforced.

TEXTILE REINFORCEMENT LAYER FOR HOSES, TUBES AND  
SIMILAR EXTENDED OBJECTS AS WELL AS FOR  
PRODUCTS MANUFACTURED FROM SUCH OBJECTS

The invention concerns a textile reinforcement layer for hoses, tubes and similar extended objects, that comprise at least one inner layer, the textile reinforcement layer and an outer layer bonded to the textile reinforcement layer and the inner layer as well as with the aforementioned products manufactured with the use of such textile reinforcement layer. This invention is especially concerned with those hoses or tubes reinforced with a textile product that are bent and/or give evidence of a big variation in diameter along their length, for example, the type of hose used in motor vehicles, in order to connect a turbocharger with an air load cooler or with the air intake of the corresponding combustion engine.

Tubes and hoses that have bends and/or big diameter variations, that due to stability reasons are provided with a textile reinforcement layer, are generally manufactured in the following way: First, one manufactures an inside tube of the desired form and shape, then the textile reinforcement layer is applied to the inside layer, and finally, an outer layer is applied, generally at high temperatures in order to obtain an intimate bond between the inner layer, the textile reinforcement layer and the outer layer. The material of the inner layer and the outer layer therefore builds a matrix in which the reinforcement layer is then embedded.

Of course, one could use several layers, instead of a single reinforcement layer, in which case an intermediate layer of matrix material may be applied between the reinforcement layers.



The main problem in the production of hoses and tubes by machine is the wrinkle free application of the textile reinforcement layer. Many times a wrinkle forms in the textile reinforcement layer when the flat textile product is introduced into hose or tube products. This may generate an area where the reinforcement layer does not overlap the inner layer or does so only imperfectly. It is clear that the properties of the product are enormously compromised through these defects. In the case of tubes or hoses with big variations in diameter, the problem is that the less elastic the structure of the textile reinforcement building material is, the less it is inclined to conform to these great diameter variations. The problem is especially noticeable in highly inflexible materials such as aramid fibers, fiberglass, carbon fibers, metallic fibers as well as cellulose fibers.

In order to allow the textile reinforcement layer to expand in the direction of the radius, and thus to conform to the difference in diameters, the textile reinforcement products are often manufactured in a "condensed" state, i.e. compressed significantly in the direction of the radius. Such condensed textile products can be applied by a machine on the inner layer of the object to be reinforced only with difficulty, or not at all, since, during the introduction of the initially flat textile product into, for example, a hose or a tube, there could be an uncontrollable material accumulation in some areas on the one hand, as described above, and also on the other hand no textile reinforcement layer at all in other areas.

In order to avoid defects such as this, this reinforcement layer is often still applied by hand on the inner layer of the tube or hose. The reinforcing layer of material is many times sewn into a sock form, which is in turn pulled over the inner layer. Whenever an attempt was made to apply this reinforcement layer by machinery, the textile material

used, often a knit material, was excessively condensed, as described above, and therefore too heavy, which led to the previously discussed problems of an uneven application.

Moreover, these textile products are very expensive.

The invention has the objective to produce a textile reinforcement layer that is useful on hoses, tubes and similar extending objects, and that can also be easily machine applied on the inner layer of the object to be reinforced. In its further development, this invention will also enable the reinforcement layer to conform to big variations in diameter without problems.

This objective has been achieved in this invention by using a material in the textile reinforcement layer, which acts to stiffen the layer at least in a direction different from the longitudinal axis of the object to be reinforced, specifically perpendicular to that axis. In this way, namely by a reinforcement essentially perpendicular to the axis, the reinforcement layer can be applied easily by machine on the inner layer of the object to be reinforced, because it can be transformed from a flat shape into the shape of the body to be reinforced without wrinkles, perhaps through guiding the reinforcement layer through a conical narrowing opening of the corresponding form.

In a preferred further development of the invention, the reinforcement material loses its stiffness at higher temperatures, such as will occur, for example, during the bonding of the outer layer with the textile reinforcement layer and the inside layer. The stiffening feature of this invention provides the textile reinforcement layer with the desired perpendicular stiffness, where this perpendicular stiffness will not subsequently compromise the ability of the reinforcement layer to conform to changes in the diameter of the object to be reinforced in an undesirable manner.

In order for the textile material to lose its stiffening properties, the melting point of the stiffening material may be lower than that of the reinforcement layer material, so that the stiffening material melts when the outer layer is bonded to the inner layer and the reinforcement layer at high temperatures. It is not required that the stiffening material will liquefy during the application of the outer layer, rather it is sufficient that the stiffening material, in spite of its stiffening action, be either adequately elastic or due to the rise in temperature remain plastic enough so that the reinforcement layer can conform to the changes in diameter of the object to be reinforced without difficulty.

In the simplest of cases, the stiffener consists of individual fibers or threads, that stretch in such a way that the textile reinforcement layer stiffens in a perpendicular direction. For example, the threads or fibers may run diagonally to the longitudinal axis of the reinforced object, but can also run perpendicular to it.

The stiffening may also be a textile product, for example, a fabric, a knitted fabric, a knit, a double knit, a fleece, etc.

According to an alternative execution, the stiffening comprises at least one foil. For example, the reinforcement textile material can be pasted onto a foil or in between two foils. The foil can be of a thermoplastic material, of heat hardened synthetic material, or even of metal. The foil can, if the material is appropriate, be extruded together with the textile reinforcement layer.

According to a modified form of the present invention, one or more of the aforementioned foils can be used instead of the textile reinforcement layer. Under this format, the stiffening, which extends at least in the horizontal direction, is achieved through the use of this foil or these foils.

The previously mentioned methods for achieving stiffness may also form a textile bond with the textile reinforcement layer. For example, the reinforcement layer can be bonded onto a double knit of individual threads or fibers that achieve the stiffening. As an alternative, the threads or fibers of the textile reinforcement layer itself can be made of a material that achieves the desired stiffness. Therefore, the textile reinforcement layer can consist of a primary material consisting of threads, fibers or yarns with a high tensile strength, which produces the strengthening effect, and moreover, can be made of a secondary material consisting of threads, fibers or yarns that are less stable with regard to temperature and that produce the desired stiffness. Also, the foil which forms the stiffening could be woven into the textile reinforcement layer. Regardless of whether or not there is a textile bond between the reinforcement layer and the stiffener, the cohesion between the textile reinforcement layer and its stiffening must be so stable that it does not separate during the machine application on an inner layer of the object to be reinforced.

In another form of the invention, the stiffener is a chemical that is absorbed by the textile reinforcement layer material. The textile reinforcement layer material can, for example, be immersed in this chemical, which in turn dries and solidifies, and therefore stiffens the reinforcement layer.

Independently of the chosen form of stiffening, this should primarily enhance the perpendicular stiffness of the textile reinforcement layer. It is entirely harmless and sometimes even desired that there also be a stiffening of the textile fibers in the longitudinal direction, since this does not interfere with the application and disappears later with the enhanced perpendicular stiffness.

The material comprising the stiffener may, for example, be similar to one of the textile reinforcement layer materials, such as a polymer or copolymer. It is desirable that the matrix material (appropriately modified) or a related material be used as the stiffening material. This can be done in the forms listed above, or in a solution to be applied to the reinforcing layer.

Materials that are appropriate are polyacetates, polyethylene terephthalate, polybutylene terephthalate, caprolactames and other synthetic materials.

By means of this invention, every textile reinforcement surface can thus be stiffened temporarily. The textile reinforcement layer that is favored is a knit, but can also be a fabric, knitted fabric, double knit, fleece, or any other textile product. The stiffening due to this invention enhances the stability of the reinforcement layer in a direction that differs from the longitudinal axis of the object to be reinforced, regardless of direction, and preferably in a perpendicular direction, for at least as long until the outside layer or the next layer of matrix material is bonded under the effects of temperature. Therefore, the invention makes it possible, that extended objects, consisting of an inner layer, an attached textile reinforcement layer and an outer layer, can be machine extruded in a single pass, and if necessary, can be adjusted to conform to large changes in diameter (perhaps to 1:2.2).

- ## Patent claims

7. Reinforcement layer in accordance with claim 5 or 6,  
characterized by the fact that the foil is extruded together with the textile  
reinforcement layer.
8. Reinforcement layer in accordance with one of claims 3 through 6,  
characterized by the fact that the stiffening forms a textile bond with the  
reinforcement layer.
9. Reinforcement layer in accordance with claim 1 or 2,  
characterized by the fact that the stiffening is a chemical material, which is  
absorbed by the reinforcement layer.
10. Reinforcement layer in accordance with one of the previous claims,  
characterized by the fact that the stiffening material is a polymer or copolymer.
11. Reinforcement layer in accordance with one of the previous claims,  
characterized by the fact that the material of the stiffener is the matrix material or  
a related material of the object to be reinforced.
12. Reinforcement layer in accordance with one of the previous' claims,  
characterized by the fact that the melting point of the stiffening material is lower  
than the melting point of the reinforcement layer material.
13. Reinforcement layer in accordance with one of the previous claims,  
characterized by the fact that the reinforcement layer is a fabric, knitted fabric,  
knit, double knit or a fleece.

14. Hose, tube or similar extended objects, characterized by the presence of one or more reinforcement layers according to the aforementioned claims, in which the stiffening of the reinforcement layer(s) has a stiffening effect at normal ambient temperature in a direction that deviates from the longitudinal axis of the object to be reinforced, especially in a substantially perpendicular direction to the longitudinal axis of the object to be reinforced.



### Summary

Textile Reinforcement Layer for Hoses, Tubes and similar extended Objects as well as for Products manufactured from such Objects

A textile reinforcement layer for hoses, tubes and similar extended objects, that consist of at least one inner layer, the mentioned textile reinforcement layer, as well as an outer layer bonded to the textile reinforcement layer and the inner layer, and which evidences a stiffening of a material, which at normal ambient temperature has a stiffening effect in at least one direction different from the longitudinal axis of the object to be reinforced, especially perpendicular of the longitudinal axis of the object to be reinforced. This method enables an error-free application of the reinforcement layer onto the inner layer by machine, specifically without wrinkles.

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PTO/SB/01 (12-97)

Approved for use through 9/30/00. OMB 0651-0032

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION</b> (37 CFR 1.63)	<b>Attorney Docket Number</b>	31068-2
	<b>First Named Inventor</b>	DE MEYER, Willy
	<b>COMPLETE IF KNOWN</b>	
	<b>Application Number</b>	09 / 581,040
	<b>Filing Date</b>	June 8, 2000
	<b>Group Art Unit</b>	
<input checked="" type="checkbox"/> Declaration Submitted with Initial Filing (unsigned)	<input type="checkbox"/> Declaration Submitted after Initial Filing (surcharge required) (37 CFR 1.16 (e))	<b>Examiner Name</b>

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**TEXTILE REINFORCING LAYER FOR FLEXIBLE HOSES, TUBES AND SIMILAR EXTENDED OBJECTS**

the specification of which *(Title of the Invention)*

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) **December 8, 1998** as United States Application Number or PCT International Application Number **PCT/EP98/07957** and was amended on (MM/DD/YYYY) **03/14/2000** (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
197 54 448.7	DE	12/08/1997	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
EP98/07957	PCT	12/98/1998	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)

☐ Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

(Page 1 of 2)

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## DECLARATION — Utility or Design Patent Application

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)
PCT/EP98/07957	12/08/1998	

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

☐ Customer Number

OR

☒ Registered practitioner(s) name/registration number listed below

Place Customer Number Bar Code Label here

Name	Registration Number	Name	Registration Number
Troy J. Cole	35,102		

☒ Additional registered practitioner(s) named on supplemental Registered Practitioner Information sheet PTO/SB/02C attached hereto.

Direct all correspondence to: ☐ Customer Number or Bar Code Label

OR ☒ Correspondence address below

Name	Troy J. Cole				
Address	WOODARD, EMHARDT, NAUGHTON, MORIARTY & MCNETT				
Address	Bank One Center/Tower, 111 Monument Circle, Suite 3700				
City	Indianapolis	State	IN	ZIP	46204
Country	US	Telephone	317-634-3456	Fax	317-637-7561

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle (if any))		Family Name or Surname					
Willy		De Meyer					
Inventor's Signature	[Signature]		Date	13 July 00			
Residence: City	Drongen	State	BE	Country	BE	Citizenship	BE
Post Office Address	J.B. d' Hanedreef, 8						
Post Office Address							
City	Drongen	State	BE	ZIP	9031	Country	BE

☒ Additional inventors are being named on the 1st supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto


Please type a plus sign (+) inside this box → ☐

PTO/SB/02A (3-97)  
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+

## DECLARATION

ADDITIONAL INVENTOR(S)  
Supplemental Sheet  
Page 1 of 1

Name of Additional Joint Inventor, if any:				<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name (first and middle (if any))				Family Name or Surname			
Mark <u>200</u>				Faket			
Inventor's Signature				Date	15.7.00		
Residence: City	Gent	State	BE	Country	BE	Citizenship	BE
Post Office Address	Knokkestraat 6 SPINMOLENPLEIN 157						
Post Office Address							
City	Gent	State	BE	ZIP	9000	Country	BE
Name of Additional Joint Inventor, if any:				<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name (first and middle (if any))				Family Name or Surname			
Inventor's Signature				Date			
Residence: City		State		Country		Citizenship	
Post Office Address							
Post Office Address							
City		State		ZIP		Country	
Name of Additional Joint Inventor, if any:				<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name (first and middle (if any))				Family Name or Surname			
Inventor's Signature				Date			
Residence: City		State		Country		Citizenship	
Post Office Address							
Post Office Address							
City		State		ZIP		Country	

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## DECLARATION

## REGISTERED PRACTITIONER INFORMATION (Supplemental Sheet)

Name	Registration Number	Name	Registration Number
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C. David Emhardt	#18,483		
Joseph A. Naughton, Jr.	#19,814		
John V. Moriarty	#26,207		
John C. McNett	#25,533		
Thomas Q. Henry	#28,309		
James M. Durlacher	#28,840		
Charles R. Reeves	#28,750		
Vincent O. Wagner	#29,596		
Steve Zlatos	#30,123		
Spiro Bereveskos	#30,821		
William F. Bahret	#31,087		
Clifford W. Browning	#32,201		
R. Randall Frisk	#32,221		
Daniel J. Lueders	#32,581		
Kenneth A. Gandy	#33,386		
Timothy N. Thomas	#35,714		
Kerry P. Sisselman	#37,237		
Kurt N. Jones	#37,996		
John H. Allie	#39,088		
Holiday W. Banta	#40,311		
Troy J. Cole	#35,102		
L. Scott Paynter	#39,797		
J. Andrew Lowes	#40,706		
Charles J. Meyer	#41,996		
Darrin Wesley Harris	#40,636		
Matthew R. Schantz	#40,800		
Gregory B. Coy	#40,967		
Lisa A. Hiday	#40,036		
John V. Daniluck	#40,581		
Christopher A. Brown	#41,642		
C. John Brannon	#44,557		
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Douglas A. Collier	#43,556		
Brad A. Schepers	#45,431		
Craig R. Tucker	#45,165		
James B. Myers	#42,021		
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